

MULTIPLE COMPACT DISC PLAYER

DP-MF7

SERVICE MANUAL

(UD-553/663/753/763)

KENWOOD

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B51-5033-00 (K) 4185

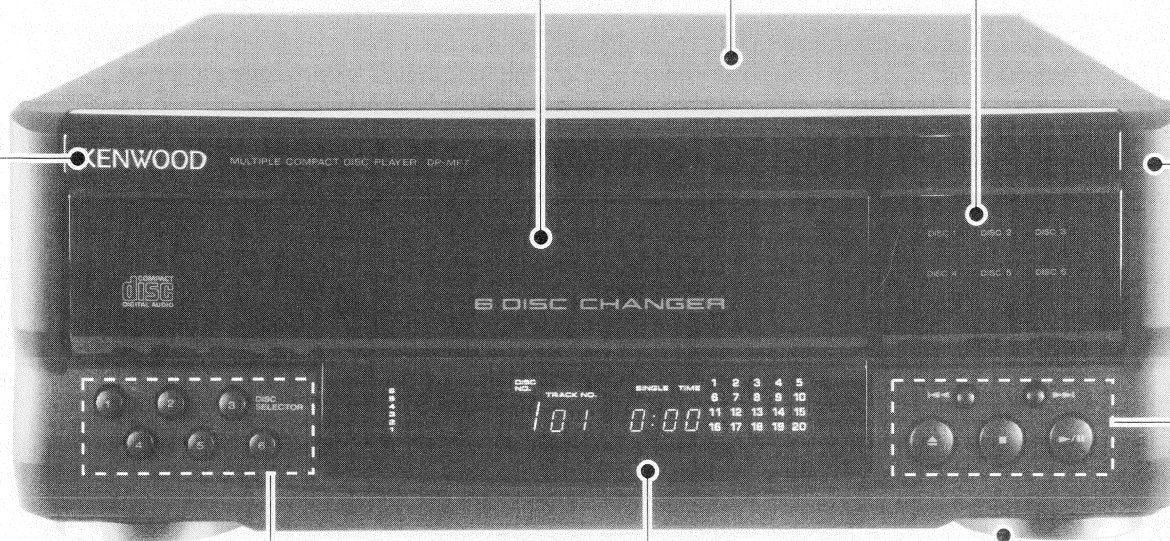
KENWOOD badge
(B43-0301-04)

Panel
(A29-0393-02)

Metallic cabinet
(A01-3227-01)

Front glass
(B10-2096-02)

Panel
(A60-0714-01)



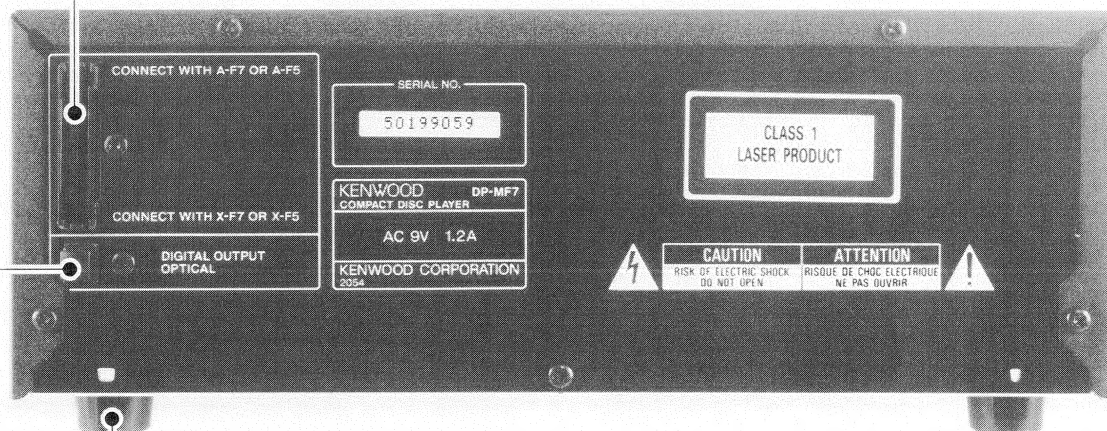
Knob
(K29-6112-02)

Front glass
(B10-2097-03)

Escutcheon
(B07-2268-04)

Knob
(K29-6112-02)

Rectangular receptacle
(E58-0006-05)



Oscillating module
(W02-1114-05)

Foot
(J02-0343-05)

* Refer to parts list on page 18.

PRECAUTIONS FOR REPAIR

DP-MF7 does not have a power supply transformer. Use A-F5, A-F7 or PS-94UA power supply to supply power.

In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No. 21 CFR 1040. 10, Chapter 1, Subchapter J.

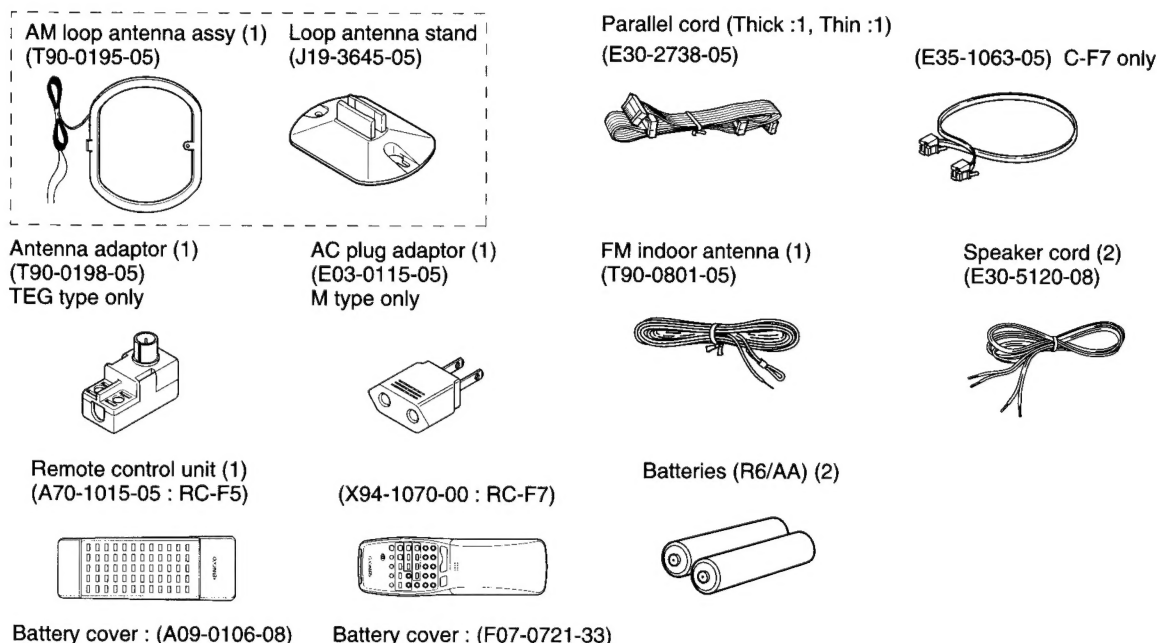
DANGER : Laser radiation when open and interlock defeated.
AVOID DIRECT EXPOSURE TO BEAM.

DP-MF7

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Accessories (Speaker cords are packed with the Speakers. All other accessories are packed with the Tuner unit.)



System configuration (For parts no. of INSTRUCTION MANUAL, refer to the list on Back cover.)

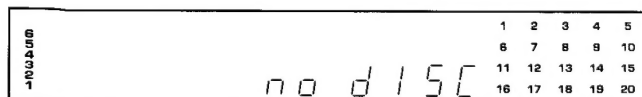
System	Amplifier	Tuner	CD Player	Deck	Speaker	System Carton Box (Parts Mo.)
UD-703	A-F7	C-F7	DP-F7	X-F7	LS-F5 (KP) / LS-F7 (Other)	--
UD-753	A-F7	C-F7	DP-MF7	X-F7	LS-F5 (KP) / LS-F7 (Other)	H60-0307-04 (K) / H60-0306-04 (PR)
UD-713	A-F7	C-F7	DP-F7	X-F7	LS-F7	H60-0304-04
UD-763	A-F7	C-F7	DP-MF7	X-F7	LS-F7	H60-0343-04
UD-503	A-F5	C-F5	DP-F7	X-F5	LS-F5	--
UD-553	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0309-04 (K) / H60-0308-04 (PR)
UD-613	A-F5	C-F5	DP-F7	X-F5	LS-F5	H60-0305-04
UD-663	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0344-04

Caution

Note related to transportation and movement

Before transporting or moving this unit, carry out the following operations.

1. Turn the power ON but do not load a disc.
2. Wait a few seconds and verify that the display shown appears.
Wait further a few seconds.
3. Turn the power OFF.



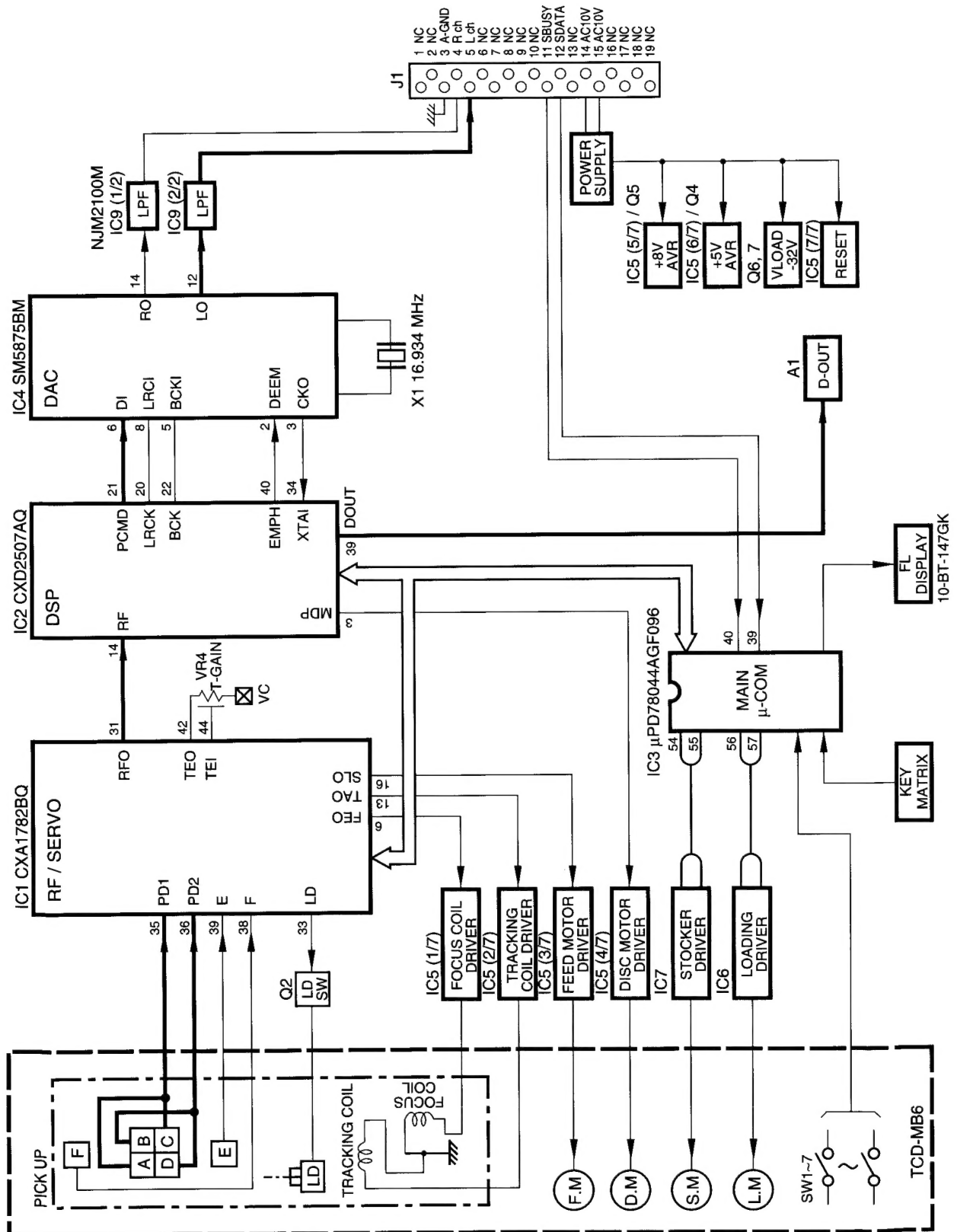
Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced. If condensation occurs, correct operation may not be possible, or the unit may not function correctly. This is not a malfunction, however, and the unit should be dried. (To do this, turn the POWER switch ON and leave the unit for several hours.)

Be especially careful in the following conditions:

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

BLOCK DIAGRAM



DP-MF7

CIRCUIT DESCRIPTION

1. Test mode

1-1 Setting the test mode

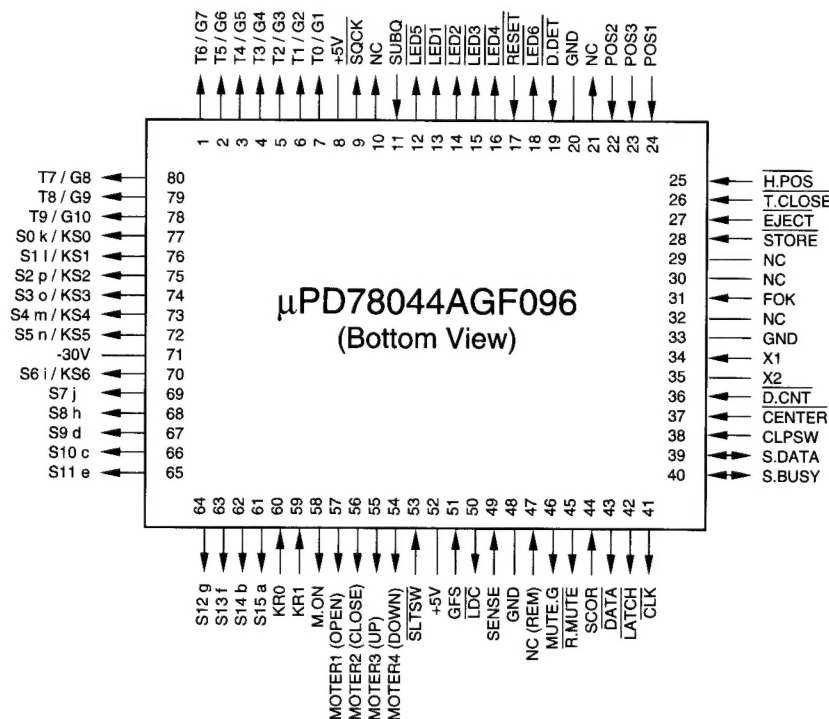
- The microprocessor built in the unit can be put to TEST MODE by just pressing the DISC 1 key when set to power on.

1-2 Key vs Function in test mode

Step	Key name	Description	Display
1	PLAY	(1) Focus servo.....ON (2) Tracking servo.....ON (3) Feed servoON	05
2	STOP	Stop	00
3	DISC 4	Search (◀◀) (Avarible while playing)	05
4	DISC 5	Search (▶▶) (Avarible while playing)	05
5	UP	Display goes on/off	
6	DOWN	(1) Focus servo.....ON (2) Tracking servo.....OFF (3) Feed servoOFF	03
7	OPEN/CLOSE	Open or close the DISC 1 tray.	
8	POWER OFF	Release the TEST MODE.	

2. Microprocessor : μ PD78044AGF096 (X32- , IC3)

2-1 Pin connection



Key matrix

	KR0	KR1
KS0	STOP	▶/
KS1	▲	
KS2	◀◀	▶▶
KS3	DISC1	DISC4
KS4	DISC2	DISC5
KS5	DISC3	DISC6
KS6	TEST	

CIRCUIT DESCRIPTION

2-2 Pin description

No.	Name	I/O	Description
1	T6/G7	O	FL grid 7
2	T5/G6	O	FL grid 6
3	T4/G5	O	FL grid 5
4	T3/G4	O	FL grid 4
5	T2/G3	O	FL grid 3
6	T1/G2	O	FL grid 2
7	T0/G1	O	FL grid 1
8	Vdd		Power supply (+5 V)
9	SQCK	O	Q-data read clock output
10	N.C	O	Not used (OPEN)
11	SUBQ	I	Q-data input
12	LED5	O	Bank LED (TRAY 5)
13	LED1	O	Bank LED (TRAY 1)
14	LED2	O	Bank LED (TRAY 2)
15	LED3	O	Bank LED (TRAY 3)
16	LED4	O	Bank LED (TRAY 4)
17	RESET	I	μ-com reset
18	LED6	O	Bank LED (TRAY 6)
19	D.DET	I	Disc detection L:Disc H:No disc
20	GND		Not used (GND)
21	N.C	O	Not used (OPEN)
22	POS2	I	Pickup position detection
23	POS3	I	Pickup position detection
24	POS1	I	Pickup position detection
25	H.POS	I	Stocker position detection L:Top
26	T.CLOSE	I	Tray close switch L:Close
27	EJECT	I	Tray open switch L:Open
28	STORE	I	Carriage position switch L:Carriage in stocker
29			Not used (Connected to +5 V)
30			Not used (GND)
31	FOK	I	FOK signal input
32			Not used (OPEN)
33	Vss		GND
34	X1	I	System clock input
35	X2		System clock input
36	D.CNT	I	Disc position detection for stocker L : Carriage of stocker can slide inside or/and outside
37	CENTER	I	Tray center switch L : Center position
38	CLPSW	I	Clamp detection H : Clamp
39	S.DATA	I/O	System serial DATA signal input/output
40	S.BUSY	I/O	System serial BUSY signal input/output

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CIRCUIT DESCRIPTION

No.	Name	I/O	Description
41	CLK	O	Clock output to CXD2507
42	LATCH	O	Latch output to CXD2507
43	DATA	O	Data output to CXD2507
44	SCOR	I	Sub-cord synchro detection signal
45	R.MUTE	O	Analog mute control
46	MUTE.G	O	Digital mute control
47	N.C(REMOCON)	I	Not used (PULL UP)
48	N.C		Not used (GND)
49	SENSE	I	SENSE input from CXD2507
50	LDC	O	Laser signal output L : Laser diode ON
51	GFS	I	Frame signal input
52	Vdd		Power supply (+5 V)
53	SLTSW	I	Start limit switch input
54	MOTER 4	O	DOWN ST moter H : ST ↓,PIC ↑
55	MOTER 3	O	UP ST moter H : ST ↑,PIC ↓
56	MOTER 2	O	Rear tray moter H : Close
57	MOTER 1	O	Front tray moter H : Open
58	M.ON	O	Focus lock countermeasure
59	KR1	I	Key return 1
60	KR0	I	Key return 0
61	S15 a	O	FL segment a
62	S14 b	O	FL segment b
63	S13 f	O	FL segment f
64	S12 g	O	FL segment g
65	S11 e	O	FL segment e
66	S10 c	O	FL segment c
67	S9 d	O	FL segment d
68	S8 h	O	FL segment h
69	S7 j	O	FL segment j
70	S6 i/KS6	O	FL segment i / Key scan 6
71	Vlord		−30V power supply for FL driver
72	S5 n/KS5	O	FL segment n / Key scan 5
73	S4 m/KS4	O	FL segment m / Key scan 4
74	S3 o/KS3	O	FL segment o / Key scan 3
75	S2 p/KS2	O	FL segment p / Key scan 2
76	S1 l/KS1	O	FL segment l / Key scan 1
77	S0 k/KS0	O	FL segment k / Key scan 0
78	T9/G10	O	FL grid 10
79	T8/G9	O	FL grid 9
80	T7/G8	O	FL grid 8

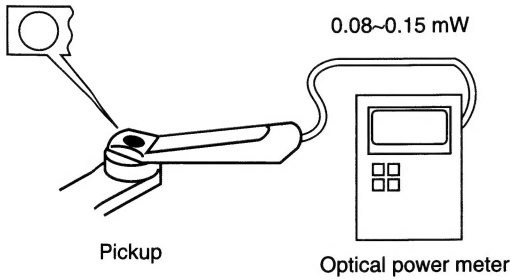
DP-MF7

ADJUSTMENT

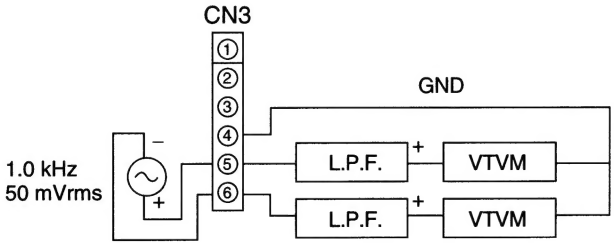
No.	ITEM	INPUT SET- TINGS	OUTPUT SETTINGS	PLAYER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	LASER POWER	—	Apply the sensor section of optical power meter on the pickup lens.	While pressing the DISC 1 key, turn the AC ON. (Test mode) Press the DOWN key, then confirm that the display is "03".	—	On the power from 0.08 to 0.15 mW, when the diffraction grating is correctly aligned with the RF level of 1.0 Vp-p or more and the TE (servo open) level of 1.0 Vp-p or more, the pickup is acceptable.	(a)
2	TRACKING ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1:RF (CN3 pin 1) CH2:TE (CN3 pin 6)	Set the unit to test mode. Open the tray and load the test disc. Close the tray. Press the DOWN key, then confirm that the display is "03".	TE BALANCE VR2	Symmetry between upper and lower patterns	(c)
3	FOCUS ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1:RF (CN3 pin 1) CH2:TE (CN3 pin 2)	Set the unit to test mode. Press the PLAY key, then confirm that the display is "05".	FE BALANCE VR1	Optimum eye pattern	(b) or (d)
4	TRACKING GAIN	Test disc Type 4 Apply signal of 1.0 kHz, 50mVrms to CN3 pin 5-6.	Connect a LPF to CN3 pin 5-6 to which you connect an oscilloscope or AC voltmeters.	Set the unit to test mode. Press the PLAY key, then confirm that the display is "05".	TRACKING GAIN VR4	Two VTVMs should read the same value.	(e)

Note:
Type 4 disc : SONY YEDS-18 Test Disc or equivalent.
LPF: Around 47 kΩ+ 390 pF or so.
Step 1~4 are in Test Mode.

(a) Laser power



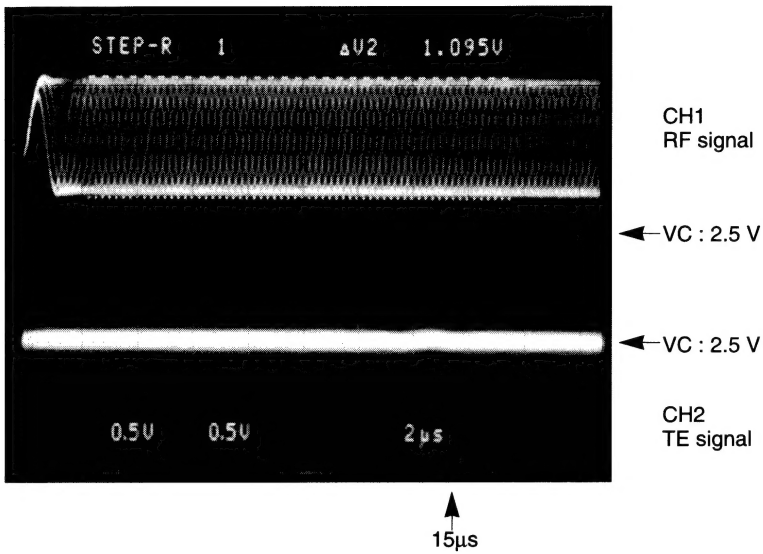
(e) Tracking gain



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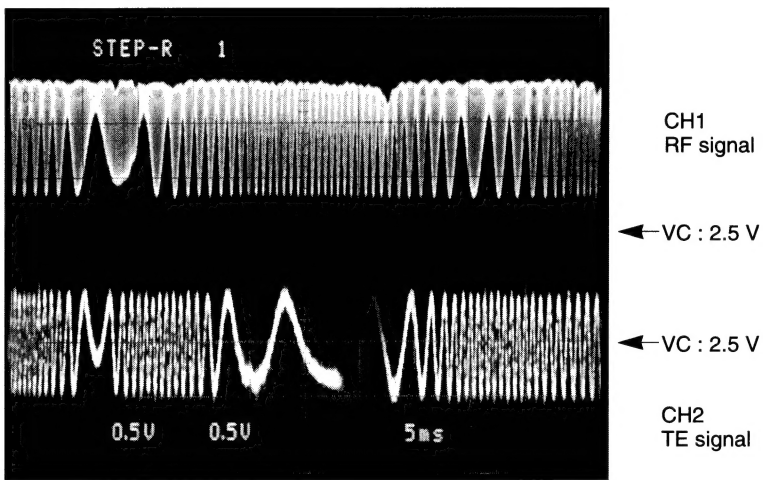
ADJUSTMENT

FIG. (b)



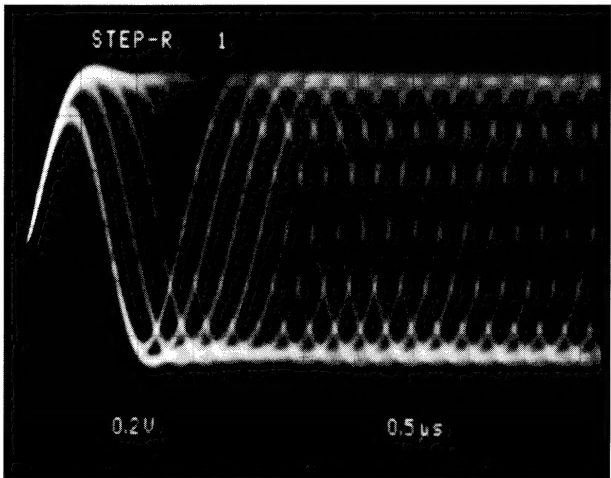
- RF signal and TE signal in test mode (PLAY).
- If the diffraction grating has been adjusted correctly, the influence of triggering is observed on the TE waveform of approx. 15μs from RF signal trigger point, in the form of a projection.

FIG. (c)



- RF signal and TE signal in test mode (Focusing servo ON / Tracking servo OFF). (Disc Type 4)
- Adjust TE signal so that the waveform is symmetrical in relation to VC. (TE BALANCE)

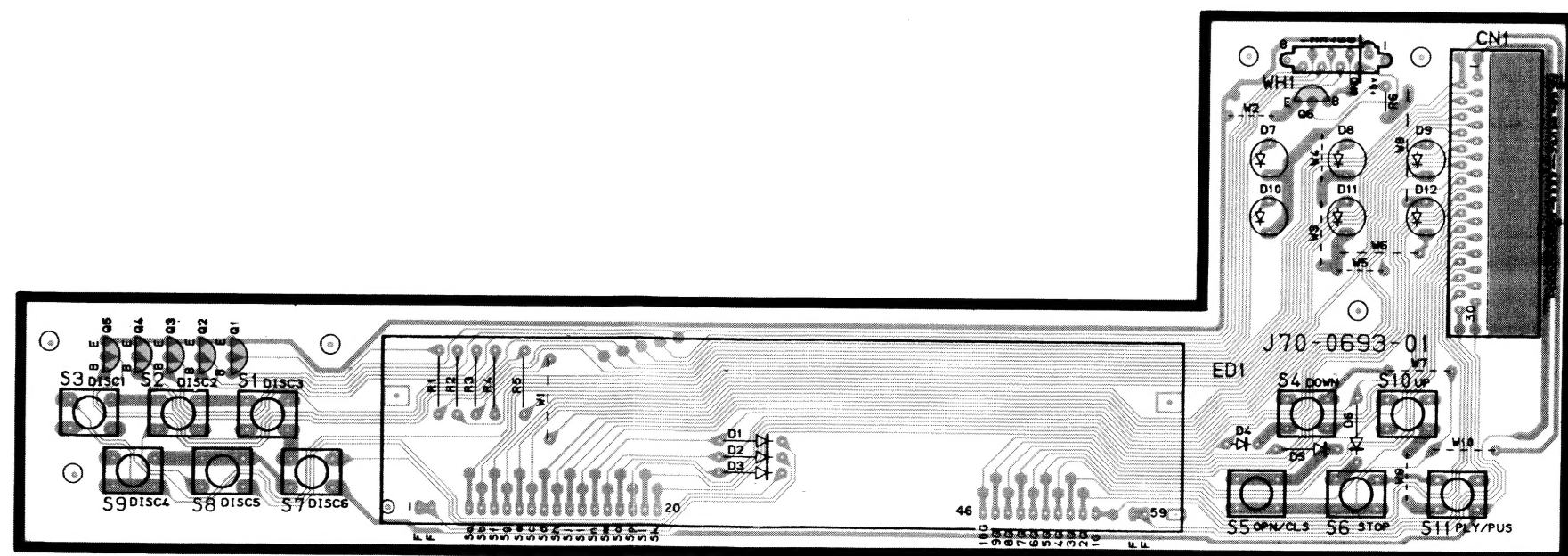
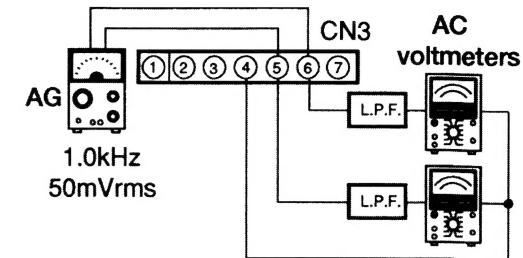
FIG. (d)



- RF signal in test mode (PLAY).
- Perform the tangential and focusing offset are focused into one point on the display. The crossing points above and below the center shall also be looked clearly. (FE BALANCE)

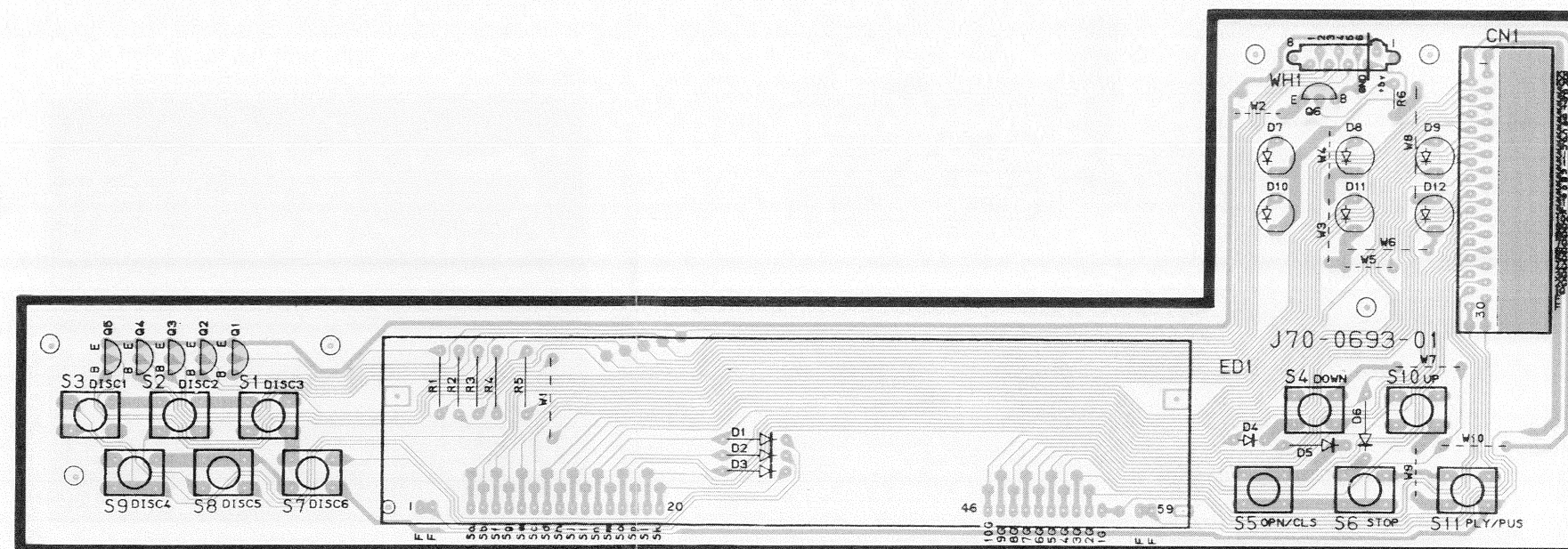
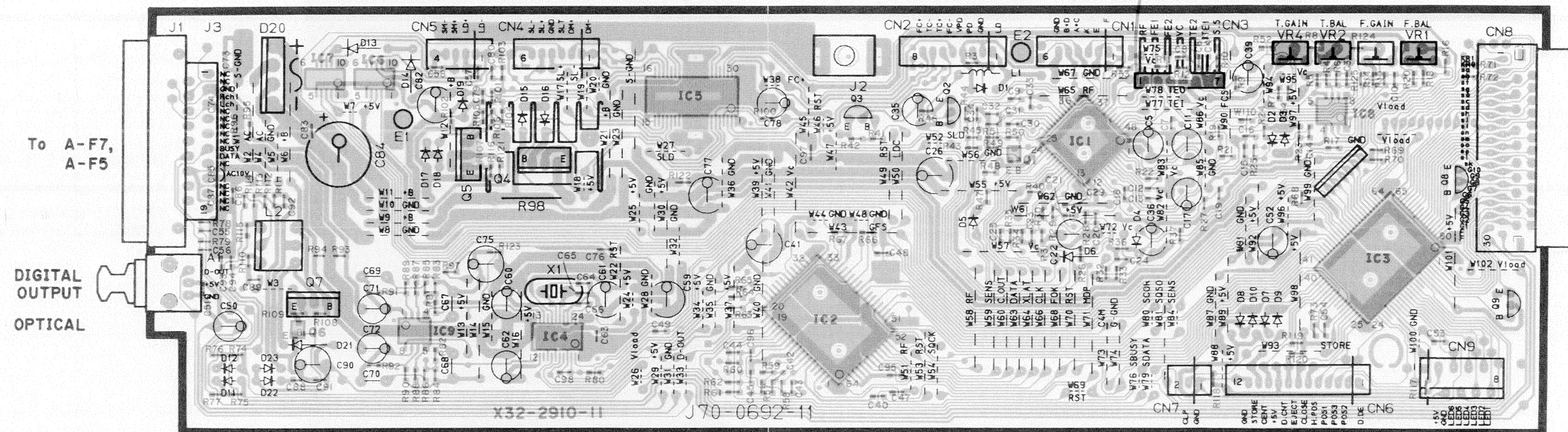
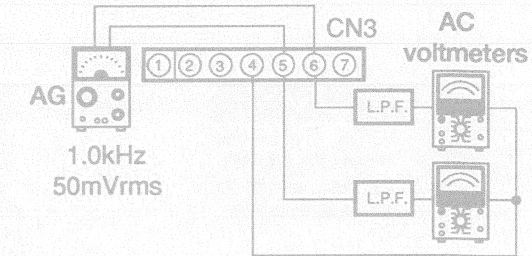
CD Player unit (X32-2910-00)
Display unit (X25-5630-00)

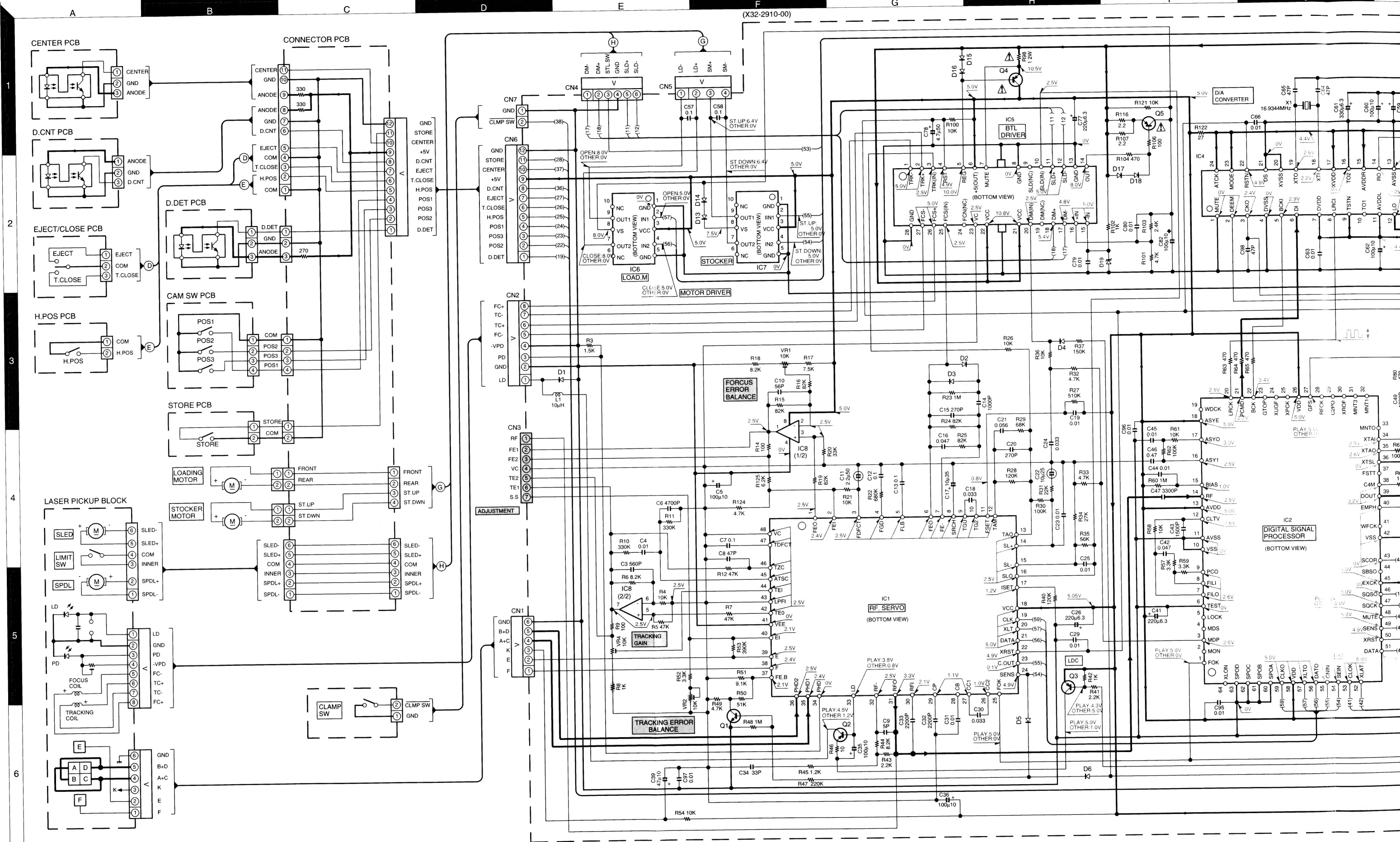
(e) Tracking gain :
Two VTVMs should read the same value.



CD Player unit (X32-2910-00)
Display unit (X25-5630-00)

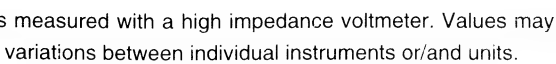
(e) Tracking gain :
Two VTVMs should read the same value.

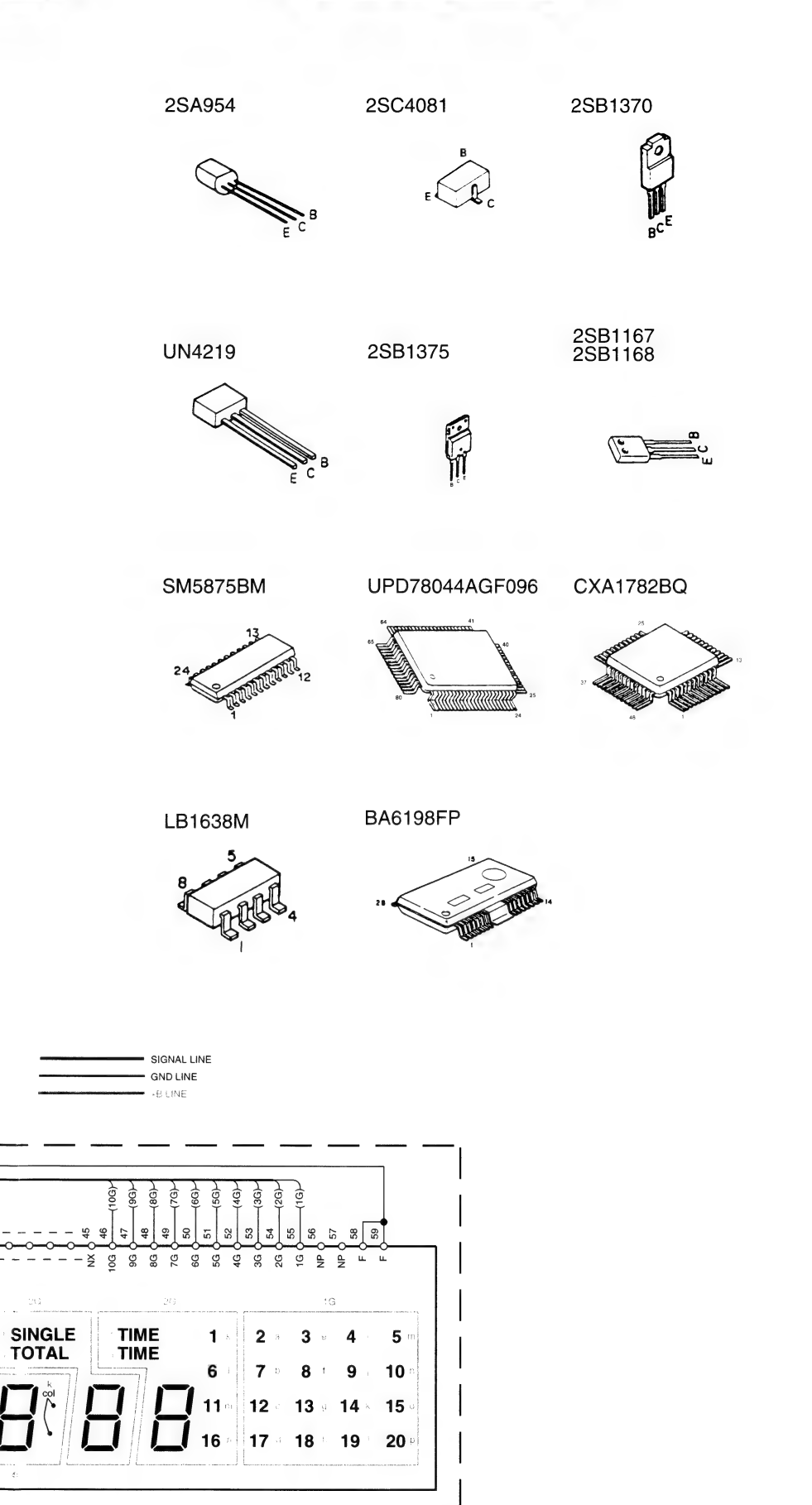
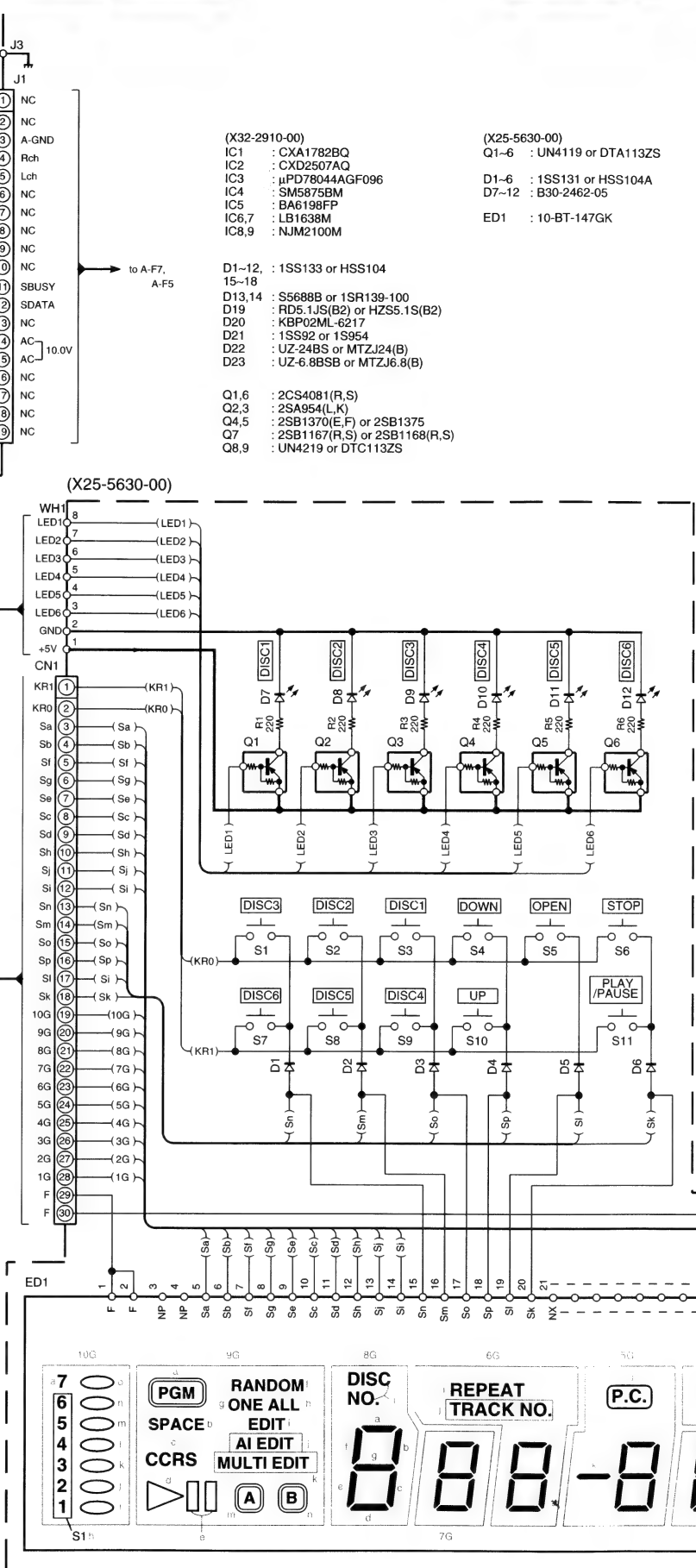
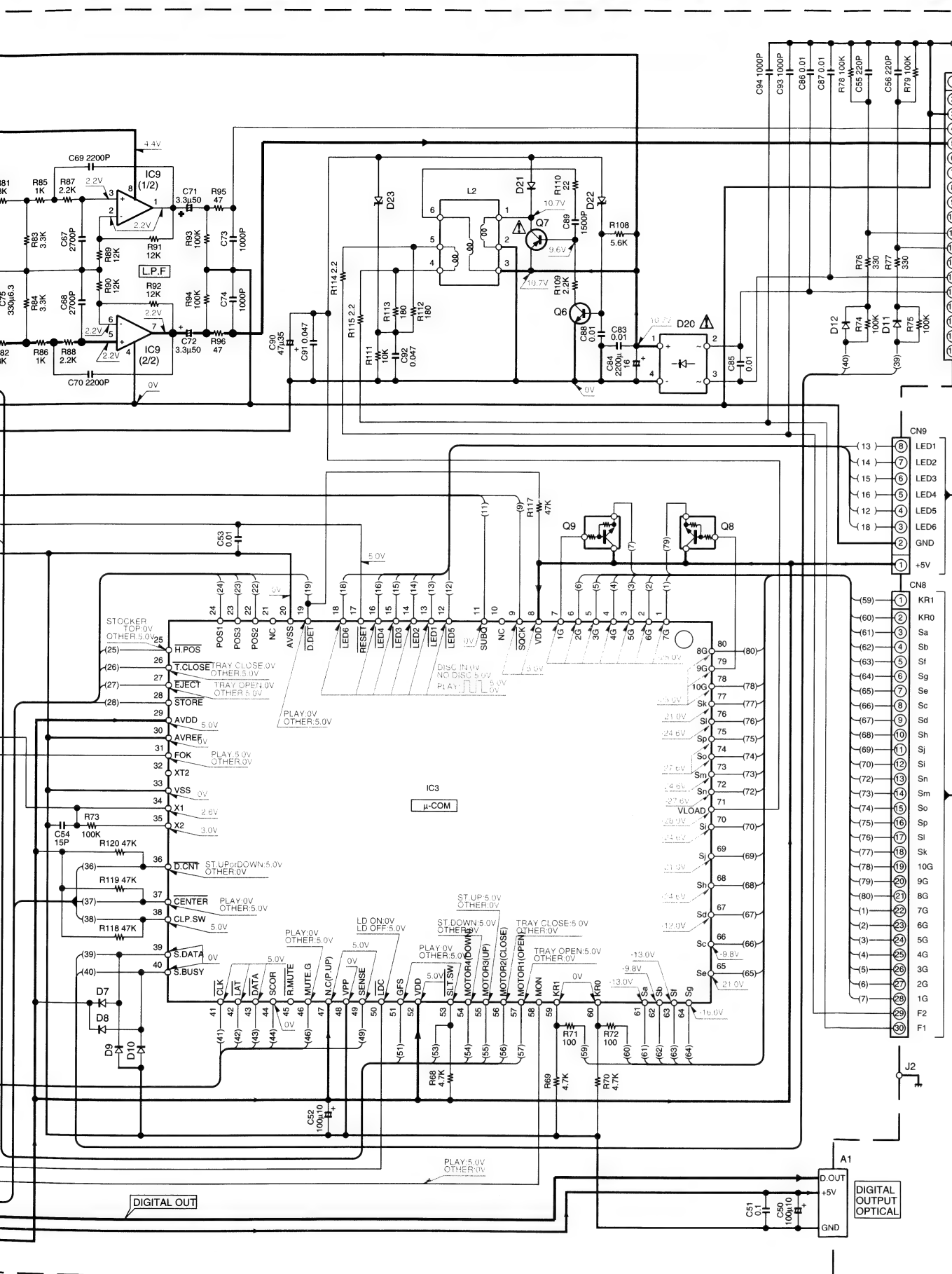




CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚡ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

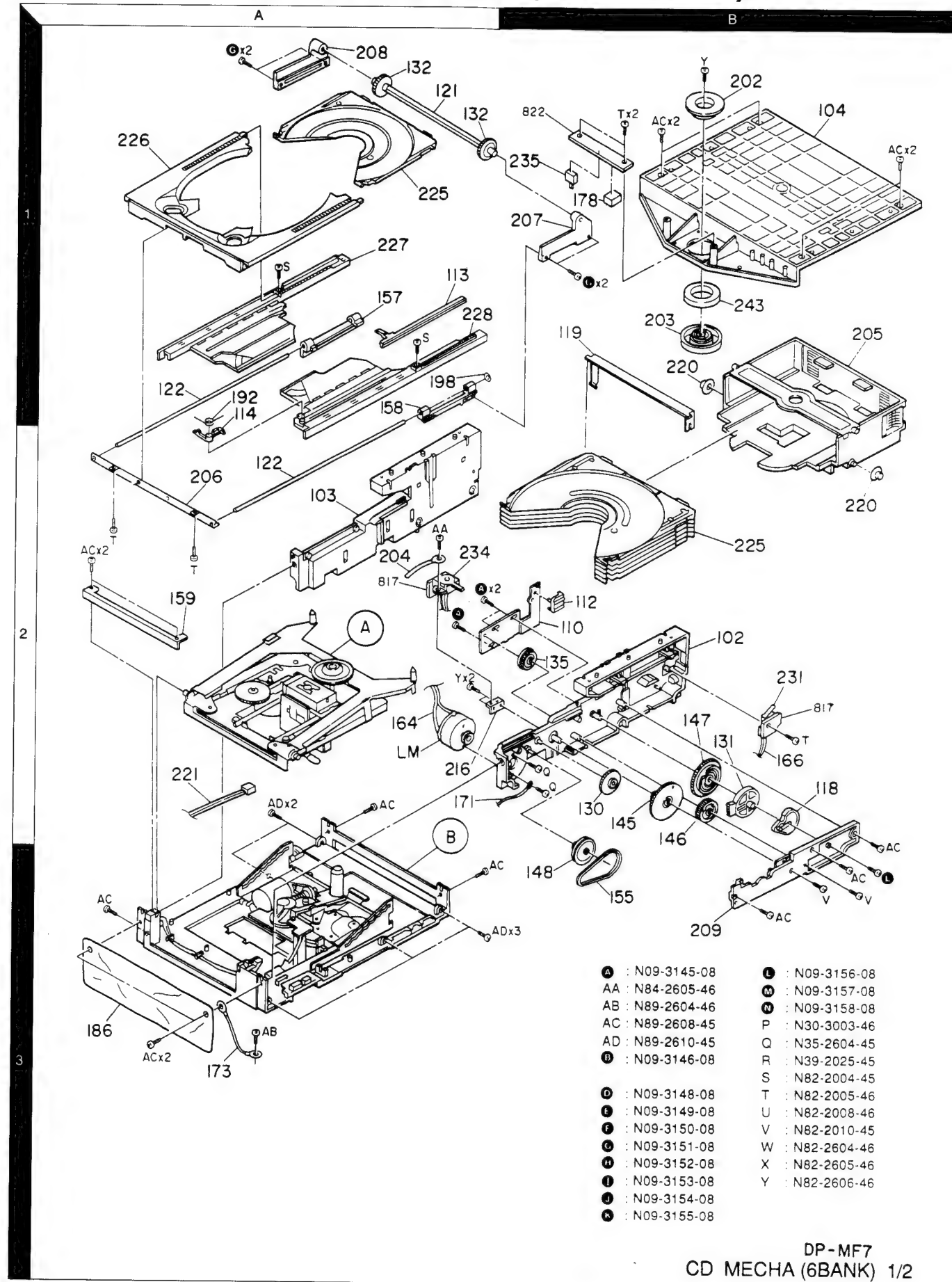
• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.





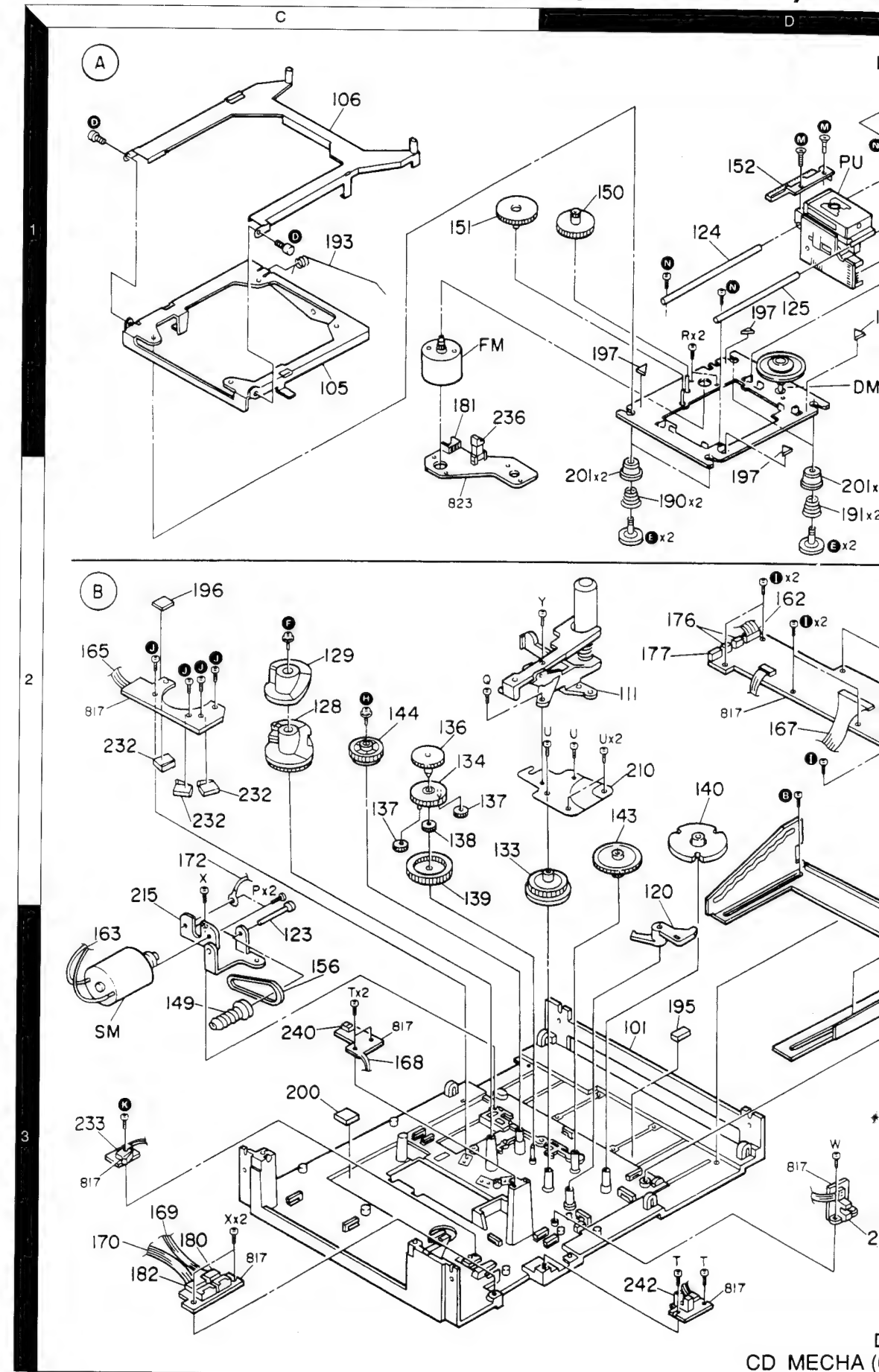
DP-MF7(J)(K)

EXPLODED VIEW (MECHANISM)



Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (MECHANISM)



Parts with the exploded numbers larger than 70

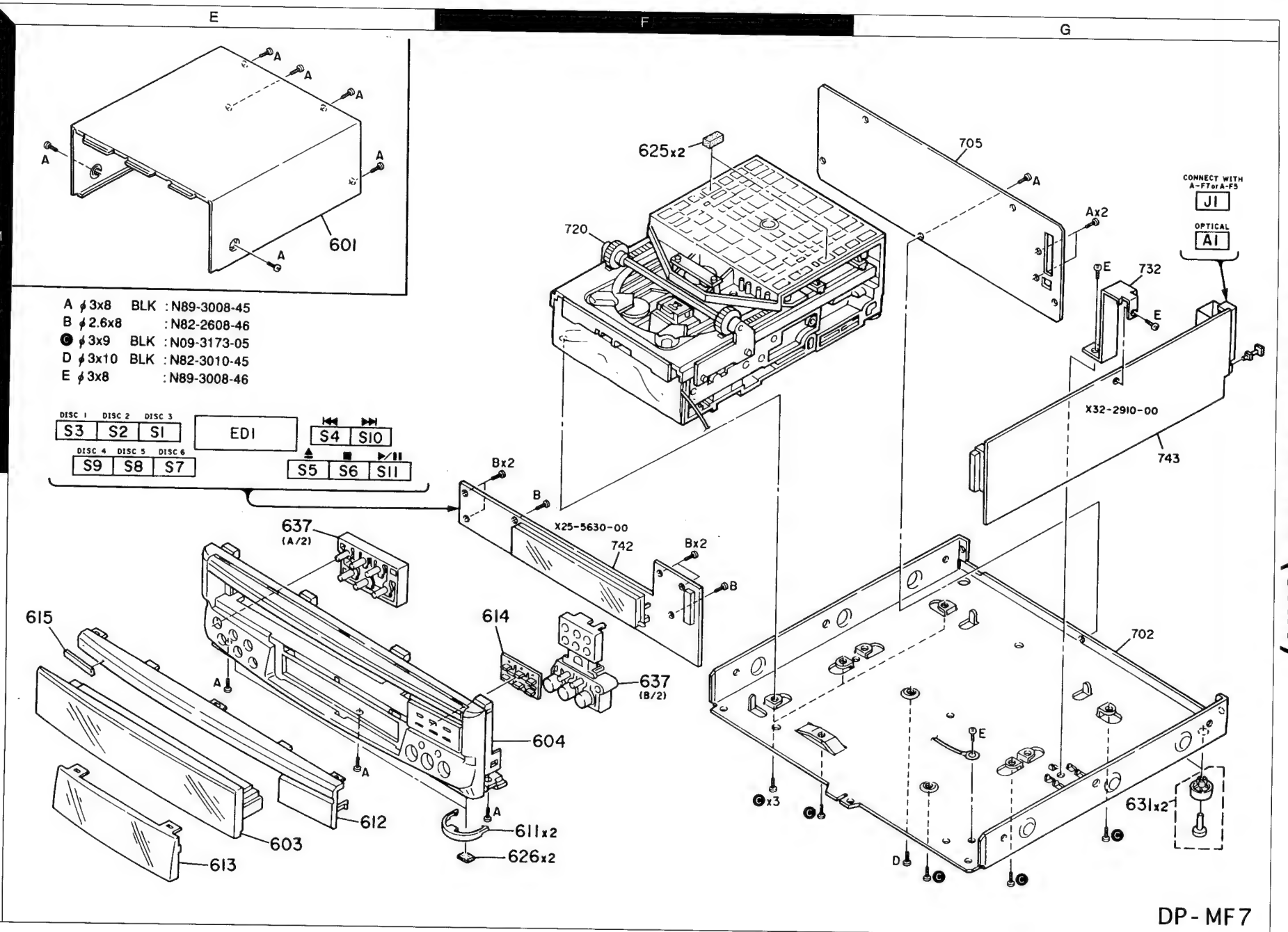
EXPLODED VIEW (UNIT)

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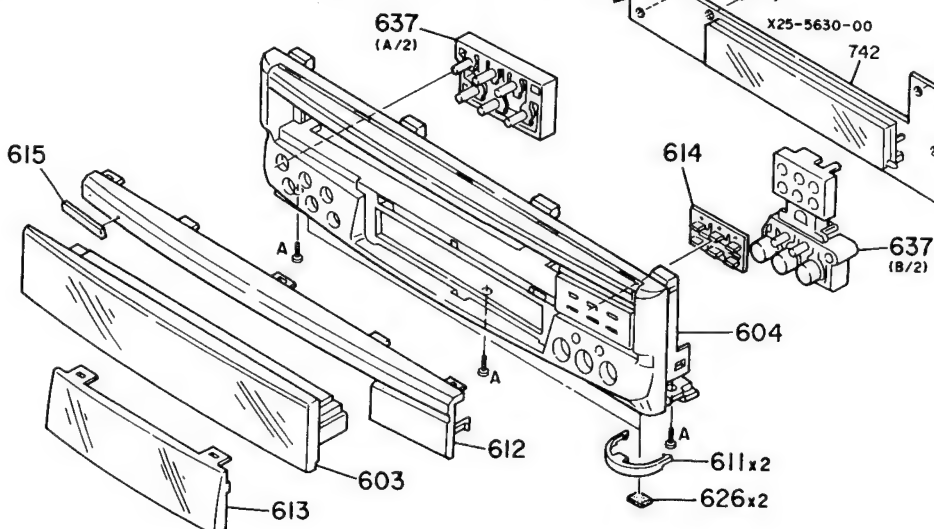
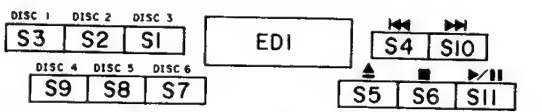
DP-MF7

PARTS LIST

DP-MF7



A ϕ 3x8 BLK : N89-3008-45
B ϕ 2.6x8 : N82-2608-46
C ϕ 3x9 BLK : N09-3173-05
D ϕ 3x10 BLK : N82-3010-45
E ϕ 3x8 : N89-3008-46



* New Parts

Parts without **Parts No.** are not supplied.Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
DP-MF7						
601	1E	*	A01-3227-01	METALLIC CABINET		
603	2E	*	A29-0393-02	PANEL		
604	2F	*	A60-0714-01	PANEL		
611	2F	*	B07-2268-04	ESCUTCHEON		
612	2E	*	B10-2096-02	FRONT GLASS		
613	2E	*	B10-2097-03	FRONT GLASS		
614	2F	*	B12-0256-04	INDICATOR		
615	2E	*	B43-0301-04	KENWOOD BADGE		
			B46-0310-03	WARRANTY CARD	TEG	
625	1F		G11-2145-04	CUSHION		
626	2F		G11-2231-04	CUSHION		
		*	H10-7007-02	POLYSTYRENE FOAMED FIXTURE		
		*	H10-7008-02	POLYSTYRENE FOAMED FIXTURE		
		*	H10-7009-02	POLYSTYRENE FOAMED FIXTURE		
		*	H10-7010-02	POLYSTYRENE FOAMED FIXTURE		
		*	H20-0576-04	PROTECTION COVER		
		*	H25-0681-04	PROTECTION BAG		
		*	H25-0681-04	PROTECTION BAG		
		*	H50-1468-04	ITEM CARTON CASE		
		*	H50-1469-04	ITEM CARTON CASE		
		*	H50-1479-04	ITEM CARTON CASE		
		*	H50-1480-04	ITEM CARTON CASE		
		*	H50-1522-04	ITEM CARTON CASE		
		*	H50-1539-04	ITEM CARTON CASE		
631	2G		J02-0343-05	FOOT REAR		
637	2E,2F	*	K29-6112-02	KNOB		
A	1E,1G		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	2F	*	N82-2608-46	BINDING HEAD TAPTITE SCREW		
C	2F,2G	*	N09-3173-05	P-TITE BIND STEPPED SCREW M3X9		
D	2G		N82-3010-45	BINDING HEAD TAPTITE SCREW		
E	1G,2G		N89-3008-46	BINDING HEAD TAPTITE SCREW		
DISPLAY UNIT (X25-5630-00)						
D7-12			B30-2462-05	LED(GRN)		
S1-11			S40-1064-05	PUSH SWITCH		
D1-6			HSS104A	DIODE		
D1-6			1SS131	DIODE		
ED1			10-BT-147GK	INDICATOR TUBE		
Q1-6			DTA113ZS	DIGITAL TRANSISTOR		
Q1-6			UN4119	TRANSISTOR		
CD PLAYER UNIT (X32-2910-00)						
C3			CK73FSL1H561J	CHIP C	560PF	J
C4			CK73FB1H103K	CHIP C	0.010UF	K
C5			CE04LW1A101M	ELECTRO	100UF	10WV
C6			CK73FB1H472K	CHIP C	4700PF	K
C7			CK73FB1E104K	CHIP C	0.10UF	K

L:Scandinavia
Y:PX(Far East, Hawaii)
Y:AAFES(Europe)

K:USA
T:England
X:Australia

P:Canada
E:Europe
M:Other Areas

R:Mexico
G:Germany
W:Malaysia Made

S:Singapore Made

⚠ indicates safety critical components.

* New Parts

Parts without **Parts No.** are not supplied.Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
C8			CC73FSL1H470J	CHIP C	47PF	J
C9			CC73FSL1H050J	CHIP C	5.0PF	J
C10			CC73FSL1H560J	CHIP C	56PF	J
C11			CE04HW1H2R2M	NP-ELEC	2.2UF	50WV
C12,13			CK73FB1E104K	CHIP C	0.10UF	K
C14			CK73FB1H102K	CHIP C	1000PF	K
C15			CC73FSL1H271J	CHIP C	270PF	J
C16			CK73FB1H473K	CHIP C	0.047UF	K
C17			CE04LW1V100M	ELECTRO	10UF	35WV
C18			CK73FB1H333K	CHIP C	0.033UF	K
C19			CK73FB1H103K	CHIP C	0.010UF	K
C20			CC73FSL1H271J	CHIP C	270PF	J
C21			CK73FB1H563K	CHIP C	0.056UF	K
C22			CE04HW1E100M	NP-ELEC	10UF	25WV
C23			CK73FB1H103K	CHIP C	0.010UF	K
C24			CK73FB1H333K	CHIP C	0.033UF	K
C25			CK73FB1H103K	CHIP C	0.010UF	K
C26			CE04LW0J221M	ELECTRO	220UF	6.3WV
C29			CK73FB1H103K	CHIP C	0.010UF	K
C30			CK73FB1H333K	CHIP C	0.033UF	K
C31			CK73FB1H103K	CHIP C	0.010UF	K
C32,33			CK73FB1H222K	CHIP C	2200PF	K
C34			CC73FSL1H330J	CHIP C	33PF	J
C35,36			CE04LW1A101M	ELECTRO	100UF	10WV
C39			CE04LW1A470M	ELECTRO	47UF	10WV
C40			CK73FB1H103K	CHIP C	0.010UF	K
C41			CE04LW0J221M	ELECTRO	220UF	6.3WV
C42			CK73FB1H473K	CHIP C	0.047UF	K
C43			CK73FB1H152K	CHIP C	1500PF	K
C44,45			CK73FB1H103K	CHIP C	0.010UF	K
C46			CK73EB1C474K	CHIP C	0.47UF	K
C47			CK73FB1H332K	CHIP C	3300PF	K
C48,49			CK73FB1H102K	CHIP C	1000PF	K
C50			CE04LW1A101M	ELECTRO	100UF	10WV
C51			CK73FB1E104K	CHIP C	0.10UF	K
C52			CE04LW1A101M	ELECTRO	100UF	10WV
C53			CK73FB1H103K	CHIP C	0.010UF	K
C54			CC73FSL1H150J	CHIP C	15PF	J
C55,56			CC73FSL1H221J	CHIP C	220PF	J
C57,58			CK73FB1E104K	CHIP C	0.10UF	K
C59,60			CE04LW1A101M	ELECTRO	100UF	10WV
C61			CE04LW0J331M	ELECTRO	330UF	6.3WV
C62			CE04LW1A101M	ELECTRO	100UF	10WV
C63			CK73FB1H103K	CHIP C	0.010UF	K
C64,65			CC73FSL1H470J	CHIP C	47PF	J
C66			CK73FB1H103K	CHIP C	0.010UF	K
C67,68			CF92FV1H272J	MF-C	2700PF	J
C69,70			CF92FV1H222J	MF-C	2200PF	J
C71,72			C90-1934-05	ELECTRO	3.3UF	50WV
C73,74			CK73FB1H102K	CHIP C	1000PF	K
C75			CE04LW0J331M	ELECTRO	330UF	6.3WV
C76			CK73FB1H103K	CHIP C	0.010UF	K
C77			CE04LW0J221M	ELECTRO	220UF	6.3WV
C78			CE04LW1H4R7M	ELECTRO	4.7UF	50WV
C79,80			CK73FB1H103K	CHIP C	0.010UF	K

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Ref. No.	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C82			CE04LW1A101M	ELECTRO 100UF 10WV		
C83			CK73FB1H103K	CHIP C 0.010UF K		
C84			CE04LW1C222M	ELECTRO 2200UF 16WV		
C85 -88			CK73FB1H103K	CHIP C 0.010UF K		
C89			CK73FB1H152K	CHIP C 1500PF K		
C90			CE04LW1V470M	ELECTRO 47UF 35WV		
C91 ,92			CK73FB1H473K	CHIP C 0.047UF K		
C93 ,94			CK73FB1H102K	CHIP C 1000PF K		
C95 -97			CK73FB1H103K	CHIP C 0.010UF K		
C98			CC73FSL1H470J	CHIP C 47PF J		
J1			E58-0006-05	RECTANGULAR RECEPTACLE		
-			J11-0098-05	WIRE CLAMPER		
L1			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L2			L19-0076-05	TRANSFORMER FOR CONVERTER		
X1			L77-1164-05	CRYSTAL RESONATOR(16.9344MHz)		
Δ R98			RS14KB3D1R0J	FL-PROOF RS 1.0 J 2W		
VR1 ,2			R12-3127-05	TRIMMING POT.(10K)		
VR4			R12-3127-05	TRIMMING POT.(10K)		
W110			R92-0670-05	CHIP R 0 OHM		
D1-12			HSS104	DIODE		
D1-12			1SS133	DIODE		
D13 ,14			S5688B	DIODE		
D13 ,14			1SR139-100	DIODE		
D15 -18			HSS104	DIODE		
D15 -18			1SS133	DIODE		
D19			HZS5.1S(B2)	ZENER DIODE		
D19			RD5.1JS(B2)	ZENER DIODE		
Δ D20			KBP02ML-6127	DIODE		
D21			1SS92	DIODE		
D21			1S954	DIODE		
D22			MTZJ24(B)	ZENER DIODE		
D22			UZ-24BS	ZENER DIODE		
D23			MTZJ6.8(B)	ZENER DIODE		
D23			UZ-6.8BSB	ZENER DIODE		
IC1			CXA1782BQ	MOS-IC		
IC2			CXD2507AQ	MOS-IC		
IC3			UPD78044AGF096	MI-COM IC		
IC4			SM5875BM	MOS-IC		
IC5			BA6198FP	ANALOGUE IC		
IC6 ,7			LB1638M	DI BI-POLAR IC		
IC8 ,9			NJM2100M	IC(OP AMPLIFIER)		
Q1			2SC4081(R,S)	TRANSISTOR		
Q2,3			2SA954(L,K)	TRANSISTOR		
Δ Q4,5			2SB1370(E,F)	TRANSISTOR		
Δ Q4,5			2SB1375	TRANSISTOR		
Δ Q6			2SC4081(R,S)	TRANSISTOR		
Δ Q7			2SB1167(R,S)	TRANSISTOR		
Δ Q7			2SB1168(R,S)	TRANSISTOR		
Q8,9			DTC113ZS	DIGITAL TRANSISTOR		
Q8,9			UN4219	TRANSISTOR		
A1			W02-1114-05	OSCILLATING MODULE		

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Ref. No.	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
MECHANISM (D40-1406-05)						
101	3D		A10-3195-08	CHASSIS (MAIN)		
102	2B		A11-1051-08	SUB CHASSIS (SIDE R)		
103	2A		A11-1052-08	SUB CHASSIS (SIDE L)		
104	1B		A11-1047-08	SUB CHASSIS (TOP COVER)		
105	1C		A11-1054-08	SUB CHASSIS CALKED ASSY		
106	1C		A11-1055-08	SUB CHASSIS CALKED ASSY (GUIDE)		
110	2B		D10-3519-08	LEVER ASSY (CHANGE PLATE)		
111	2D		D10-3520-08	ARM ASSY (DISC LOCK)		
112	2B		D10-3510-08	LEVER (CARRIAGE OPENNER)		
113	1A		D10-3522-08	SLIDER (SHUTTLE)		
114	1A		D10-3523-08	LEVER (SHUTTLE LOCK)		
117	3D		D10-3513-08	SLIDER (STOCKER CAM)		
118	2B		D10-3525-08	ARM (TRACE)		
119	1B		D10-3509-08	ARM (ASSIST)		
120	2D		D10-3527-08	ARM (CHANGE)		
121	1A		D10-3528-08	ROD (TIMING SHAFT)		
122	1A,2A		D10-3529-08	ROD (TRAY GUIDE)		
123	3C		D10-3530-08	ROD (WORM SHAFT)		
124	1D		D10-3531-08	ROD (MAIN)		
125	1D		D10-3532-08	ROD (SUB)		
128	2C		D12-0149-08	CAM (LO)		
129	2C		D12-0150-08	CAM (TOP)		
130	2B		D13-1660-08	GEAR (SIDE IDLER)		
131	2B		D13-1661-08	GEAR (TRAY STOPPER)		
132	1A		D13-1662-08	GEAR (TIMING)		
133	2C		D13-1663-08	GEAR (LOCK IDLER)		
134	2C		D13-1664-08	GEAR ASSY (D2-ST)		
135	2B		D13-1665-08	GEAR (CHANGE)		
136	2C		D13-1666-08	GEAR (D1-ST)		
137	2C		D13-1667-08	GEAR (D3-ST)		
138	2C		D13-1668-08	GEAR (D4-ST)		
139	2C		D13-1669-08	GEAR (D5-ST)		
140	2D		D13-1659-08	GEAR (D6P-ST)		
143	2D		D13-1672-08	GEAR (D7M-ST)		
144	2C		D13-1673-08	GEAR (ID-ST)		
145	2B		D13-1674-08	GEAR (S-F)		
146	2B		D13-1675-08	GEAR (S-I)		
147	2B		D13-1676-08	GEAR (S-M)		
148	3B		D13-1677-08	GEAR (S-P)		
149	3C		D13-1678-08	GEAR (ST-WORM)		
150	1D		D13-1679-08	GEAR (MIDDLE)		
151	1C		D13-1680-08	GEAR (FINAL)		
152	1D		D13-1681-08	RACK (GEAR)		
155	3B		D16-0380-08	BELT (LOADING)		
156	3C		D16-0381-08	BELT (STOCKER)		
157	1A		D23-0318-08	BEARING (TRAY GUIDE L)		
158	1A		D23-0319-08	BEARING (TRAY GUIDE R)		
159	2A		D32-0345-08	STOPPER (MECHA B)		
162	2D		E35-1064-08	WIRING HARNESS (6P)		
163	3C		E35-1065-08	WIRING HARNESS (2P175)		
164	2A		E35-1066-08	WIRING HARNESS (2P330)		
165	2C		E35-1067-08	WIRING HARNESS (4P)		

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PARTS LIST

DP-MF7

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Ref. No.	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
166	2B		E35-1068-08	WIRING HARNESS (2P50)		
167	2D		E35-1069-08	WIRING HARNESS (11P)		
168	3C		E35-1070-08	WIRING HARNESS (3P)		
169	1D,3C		E35-1071-08	WIRING HARNESS (5P)		
170	1D,3C		E35-1072-08	WIRING HARNESS (8P)		
171	2A		E35-1073-08	LEAD WIRE (WITH LUG A)		
172	2C		E35-1074-08	LEAD WIRE (WITH LUB B)		
173	3A	*	E35-1195-08	LUG LEAD		
176	2D		E40-3246-05	PIN ASSY (B2B-PH-K-S)		
177	2D		E40-3247-05	PIN ASSY (B3B-PH-K-S)		
178	1B		E40-3260-05	PIN ASSY (S2B-PH-K-S)		
179	2D		E40-3262-05	PIN ASSY (S4B-PH-K-S)		
180	3C		E40-3263-05	PIN ASSY (S5B-PH-K-S)		
181	1C,2D		E40-3264-05	PIN ASSY (S6B-PH-K-S)		
182	3C		E40-3266-05	PIN ASSY (S8B-PH-K-S)		
183	2D		E40-3270-05	PIN ASSY (S12B-PH-K-S)		
186	3A		F12-0137-08	ALUMI SHIELD		
190	2D		G01-3756-08	COMPRESSION SPRING (REAR)		
191	2D		G01-3757-08	COMPRESSION SPRING (FRONT)		
192	1A		G01-3758-08	TORSION SPRING (SHUTTLE LOCK)		
193	1C		G01-3759-08	TORSION SPRING (GUIDE PLATE)		
195	3D		G13-0506-08	CUSHION (8X15)		
196	2C		G13-0507-08	CUSHION (8X8)		
197	1D,2D		G13-0508-08	CUSHION		
198	1A		G13-0509-08	CUSHION (STOP RUBBER)		
200	3C		G11-0510-08	CUSHION (10X10)		
201	2D		J02-1123-08	INSULATOR		
202	1B		J11-0307-08	CLAMPER (HI)		
203	1B		J11-0308-08	CLAMPER (LO)		
204	2A		J11-0309-08	WIRE CLAMPER		
205	1B		J19-3749-08	HOLDER ASSY (STOCKER)		
206	2A		J19-3744-08	HOLDER (TRAY PLATE)		
207	1B		J19-3745-08	HOLDER (TRAY R)		
208	1A		J19-3746-08	HOLDER (TRAY L)		
209	3B		J19-3747-08	HOLDER (GEAR)		
210	2D		J19-3748-08	HOLDER (GEAR PLATE)		
215	2C		J21-6228-08	MOTOR MOUNTING HARDWARE		
216	2A		J21-6229-08	SWITCH MOUNTING HARDWARE		
220	1B,2B		J31-0867-08	COLLAR (STOCKER)		
221	2A		J61-0097-08	BAND		
225	1A,2B		J99-0555-08	TRAY (CARRIAGE -KW)		
226	1A		J99-0561-08	TRAY (TOP)		
227	1A		J99-0563-08	TRAY (L)		
228	1A		J99-0565-08	TRAY (R)		
A	2A		N09-3145-08	STEPPED SCREW (CHANGE PLATE)		
AA	2A		N84-2605-46	S-TITE PAN HD SCREW (M2.6X5)		
AB	3A		N89-2604-46	B-TITE BIND HD SCREW (M2.6X4)		
AC	3A,3B		N89-2608-45	B-TITE BIND HD SCREW (M2.6X8)		
AD	2A,3B		N89-2610-45	B-TITE BIND HD SCREW (M2.6X10)		
B	2D		N09-3146-08	STEPPED SCREW (STOCKER CAM)		
D	1C		N09-3148-08	SCREW (T.U ASSY)		
IE	2D		N09-3149-08	STEPPED SCREW (INSULATOR)		
F	2C		N09-3150-08	PAN HD TAP WITH WASHER (M3X14)		

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G	1A,1B		N09-3151-08	B-TITE BIND HD SCREW (M2.6X11)		
H	2C		N09-3152-08	B-TITE WITH WASHER (M2X8)		
I	2D		N09-3153-08	TAPTITE SCREW (M1.7X4)		
J	2C		N09-3154-08	TAPTITE SCREW (M1.7X5)		
K	3C		N09-3155-08	TAPTITE SCREW (M1.7X8)		
L	3B		N09-3156-08	SEMS SCREW (M2X4W)		
M	1D		N09-3157-08	FLAT SCREW (M2X5)		
N	1D		N09-3158-08	S-TITE SCREW (M2.6X6)		
P	2C		N30-3003-46	PAN HEAD SCREW (M3X3)		
Q	2B,2C		N35-2604-45	BIND HEAD SCREW BLACK (M2.6X4)		
R	1D		N39-2025-45	PAN HEAD SCREW (M2X2.5)		
S	1A		N82-2004-45	P-TITE BIND HD SCREW (M2X4)		
T	2A,3D		N82-2005-46	P-TITE BIND HD SCREW (M2X5)		
U	2D		N82-2008-46	P-TITE BIND HD SCREW (M2X8)		
V	3B		N82-2010-45	P-TITE BIND HD SCREW (M2X10)		
W	3D		N82-2604-46	P-TITE BIND HD SCREW (M2.6X4)		
X	2C,3C		N82-2605-46	P-TITE BIND HD SCREW (M2.6X5)		
Y	2A,1B		N82-2606-46	P-TITE BIND HD SCREW (M2.6X6)		
231	2B		S64-0016-08	LEVER SW (STORE)		
232	2C		S64-0017-08	LEVER SW (CAM POS)		
233	3C		S64-0018-08	LEVER SW (HOME POS)		
234	2A		S64-0019-08	LEVER SW (OPEN/CLOSE)		
235	1B		S64-0020-08	LEVER SW (OVER DISC)		
236	1C		S74-0048-08	LEAF SW (STL)		
240	3C		T95-0137-08	PHOTO REFLECTOR (DISC)		
241	3D		T95-0138-08	PHOTO INTERRUPTER (STOCKER POS)		
242	3D		T95-0139-08	PHOTO INTERRUPTER (PLAY POS)		
243	1B		T99-0560-08	MAGNET		
DM	1D		A11-1050-08	SUB CHASSIS ASSY (DISC)		
FM	1C		T42-0700-08	MOTOR ASSY (FEED)		
LM	2A		T42-0699-08	MOTOR ASSY (LOADING)		
PU	1D		T25-0037-08	LASER PICKUP		
SM	3C		T42-0698-08	MOTOR ASSY (STOCKER)		

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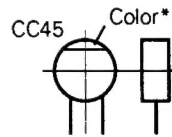
⚠ indicates safety critical components.

PARTS LIST

CAPACITORS

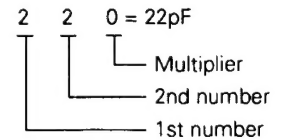
CC 45 TH 1H 220 J
1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc. 4 = Voltage rating
2 = Shape ... round, square, ect. 5 = Value
3 = Temp. coefficient 6 = Tolerance



• Capacitor value

- 010 = 1pF
100 = 10pF
101 = 100pF
102 = 1000pF = 0.001μF
103 = 0.01μF



• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 -20	+80 -20	+100 -0	More than 10μF - 10 ~ +50 Less than 4.7μF - 10 ~ +75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

2nd word 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	–
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	–
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	–

• Chip capacitors

- (EX) C C 7 3 F S L 1 H 0 0 0 J
1 2 3 4 5 6 7
(Chip) (CH, RH, UJ, SL)
- (EX) C K 7 3 F F 1 H 0 0 0 Z
1 2 3 4 5 6 7
(Chip) (B, F)
- Refer to the table above.
1 = Type
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Voltage rating
6 = Value
7 = Tolerance

Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

RESISTORS

• Chip resistor (Carbon)

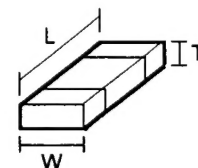
- (EX) R K 7 3 E B 2 B 0 0 0 J
1 2 3 4 5 6 7
(Chip) (B, F)

• Carbon resistor (Normal type)

- (EX) R D 1 4 B B 2 C 0 0 0 J
1 2 3 4 5 6 7

- 1 = Type 5 = Rating wattage
2 = Shape 6 = Value
3 = Dimension 7 = Tolerance
4 = Temp. coefficient

Dimension



Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

DP-MF7

SPECIFICATIONS

LaserSemiconductor laser
Playing rotation.....200 rpm~500 rpm (CLV)
Frequency response8 Hz~20 kHz, ± 1.0 dB
Signal to noise ratioMore than 95 dB
Total harmonic distortion + noise
.....Less than 0.007 % (at 1 kHz)
Channel separationMore than 88 dB (at 1 kHz)
Wow & flutterUnmeasurable limit

General

DimensionsW: 270 mm (10-5/8")
.....H : 104 mm (4-1/8")
.....D : 320 mm (12-5/8")
Weight (Net)4.0 kg (4.9 lb)

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

INSTRUCTION MANUAL

UD-503/553

ENGLISH	B60-2059-00	KP
FRENCH	B60-2060-00	P
FRENCH	B60-2052-00	E
GERMAN	B60-2053-00	EG
DUTCH	B60-2054-00	E
ITALIAN	B60-2055-00	E
SPANISH	B60-2056-00	E
SPANISH	B60-2061-00	R

UD-613/663

ENGLISH	B60-2051-00	YMX
SPANISH	B60-2261-00	M
CHINESE	B60-2057-00	M
TAIWANESE	B60-2058-00	M

UD-703/753

ENGLISH	B60-2066-00	KPT
FRENCH	B60-2067-00	PE
GERMAN	B60-2068-00	EG
DUTCH	B60-2069-00	E
ITALIAN	B60-2070-00	E
SPANISH	B60-2071-00	RE
For RDS	B60-2074-00	TEG

UD-713/763

ENGLISH	B60-2259-00	YMX
SPANISH	B60-2260-00	M
CHINESE	B60-2072-00	M
TAIWANESE	B60-2073-00	M

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